GA-8I845GVM775

Intel® Pentium® 4 LGA775 Processor Motherboard

User's Manual

Rev. 1001
12ME-I845GVMT-1001

Copyright

Notice

Product Manual Classification

In order to assist in the use of this product, Gigabyte has categorized the user manual in the following:

- For detailed product information and specifications, please carefully read the "Product User Manual".

- For detailed information related to Gigabyte's unique features, please go to "Technology Guide" section on Gigabyte's website to read or download the information you need.

For more product details, please click onto Gigabyte's website at www.gigabyte.com.tw

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GA-8I845GVM775

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Intel LGA775 CPU

CPUCLK+/- (100/133MHz)

System Bus 400/533MHz

VGA Port

Intel 845GV

333/266 MHz

DDR RAM

AGPCLK (66MHz)

MCHCLK+/- (100/133MHz)
GMCHCLK (66MHz)

66 MHz
33 MHz
14.318 MHz
48 MHz

3 PCI

FWH

Intel ICH 4

LPC BUS

ITE8712

Game Port
Floppy
LPT Port

PS/2 KB/Mouse

RTL8100C

RJ45

AC97 Link

6*USB 2.0/1.1 (4 by cable)

ATA33/66/100 IDE Channels

24 MHz
33 MHz

PCICLK (33MHz)

AC97 CODEC

2 COM Ports

MIC   LINE-IN   LINE-OUT

PCICLK (33MHz)
USBCLK (48MHz)
14.318 MHz
33 MHz
24 MHz

CLK GEN

MCHCLK+/- (100/133MHz)
CPUCLK+/- (100/133MHz)
AGPCLK (66MHz)
GMCHCLK (66MHz)
ICH3V66 (66MHz)

Chapter 1 Hardware Installation

1-1 Considerations Prior to Installation

Preparing Your Computer

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instructions below:

1. Please turn off the computer and unplug its power cord.
2. When handling the motherboard, avoid touching any metal leads or connectors.
3. It is best to wear an electrostatic discharge (ESD) cuff when handling electronic components (CPU, RAM).
4. Prior to installing the electronic components, please have these items on top of an antistatic pad or within a electrostatic shielding container.
5. Please verify that you the power supply is switched off before unplugging the power supply connector from the motherboard.

Installation Notices

1. Prior to installation, please do not remove the stickers on the motherboard. These stickers are required for warranty validation.
2. Prior to the installation of the motherboard or any hardware, please first carefully read the information in the provided manual.
3. Before using the product, please verify that all cables and power connectors are connected.
4. To prevent damage to the motherboard, please do not allow screws to come in contact with the motherboard circuit or its components.
5. Please make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
6. Please do not place the computer system on an uneven surface.
7. Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
8. If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

Instances of Non-Warranty

1. Damage due to natural disaster, accident or human cause.
2. Damage as a result of violating the conditions recommended in the user manual.
3. Damage due to improper installation.
4. Damage due to use of uncertified components.
5. Damage due to use exceeding the permitted parameters.
6. Product determined to be an unofficial Gigabyte product.

1-2   Feature Summary

CPU	◆	Supports the latest Intel® Pentium® 4 LGA775 CPU
	◆	Supports 533/400MHz FSB
	◆	L2 cache varies with CPU
Chipset	◆	Northbridge: Intel® 82845GV GMCH chipset
	◆	Southbridge: Intel® 82801 (ICH4)
Memory	◆	2 DDR DIMM memory slots (supports up to 2GB memory)
	◆	Supports dual channel DDR333/DDR266 DIMM
	◆	Supports 2.5V DDR DIMM
Slots	◆	3 PCI slots
IDE Connections	◆	2 IDE connection (UDMA 33/ATA 66/ATA 100), allows connection of 4 IIDE devices
FDD Connections	◆	1 FDD connection, allows connection of 2 FDD devices
Peripherals	◆	1 parallel port supporting Normal/EPP/ECP mode
	◆	1 Serial port (COMA), 1 VGA port, COMB on board
	◆	6 USB 2.0/1.1 ports (rear x 2, front x 4 via cable)
	◆	1 front audio connector
	◆	1 PS/2 keyboard port
	◆	1 PS/2 mouse port
Onboard LAN	◆	Onboard Realtek 8100C chip (10/100 Mbit)
	◆	1 RJ 45 port
Onboard Audio	◆	Realtek ALC655 codec
	◆	Supports Jack-Sensing function
	◆	Supports 2 / 4 / 6 channel audio
	◆	Supports Line Out / 2 front speaker
	◆	Line In / 2 rear speaker (by s/w switch)
	◆	Mic In / center & subwoofer (by s/w switch)
	◆	Supports SPDIF In/Out connection
	◆	CD In / AUX_In
I/O Control	◆	IT8712F
Hardware Monitor	◆	System voltage detection
	◆	CPU temperature detection
	◆	CPU / System fan speed detection
	◆	CPU warning temperature
	◆	CPU / System fan failure warning
	◆	CPU smart fan control
BIOS	◆	Use of licensed AWARD BIOS
	◆	Supports Q-Flash
Additional Features	◆	Supports @BIOS
	◆	Supports EasyTune4
Overclocking	◆	Over Clock via BIOS (DDR/CPU)
Form Factor	◆	Micro ATX form factor; 24.4 cm x 22.0 cm

1-3   Installation of the CPU and Heatsink

CAUTION

Before installing the CPU, please comply with the following conditions:
1.   Please make sure that the motherboard supports the CPU.
2.   Please take note of the one indented corner of the CPU. If you install the CPU in the wrong direction, the CPU will not insert properly. If this occurs, please change the insert direction of the CPU.
3.   Please add an even layer of heat sink paste between the CPU and heatsink.
4.   Please make sure the heatsink is installed on the CPU prior to system use, otherwise overheating and permanent damage of the CPU may occur.
5.   Please set the CPU host frequency in accordance with the processor specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the required standards for the peripherals. If you wish to set the frequency beyond the proper specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

NOTE

HT functionality requirement content :
Enabling the functionality of Hyper-Threading Technology for your computer system re-quires all of the following platform components:
- CPU: An Intel® Pentium 4 Processor with HT Technology
- Chipset: An Intel® Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology

1-3-1   Installation of the CPU
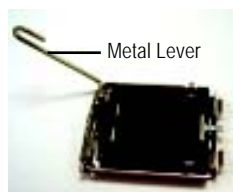
Metal Lever

Fig. 1
Gently lift the metal lever located on the CPU socket to the upright position.

Fig. 2
Remove the plastic covering on the CPU socket.
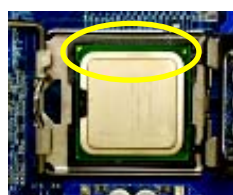
Fig. 3
Notice the small gold colored triangle located on the edge of the CPU socket. Align the indented corner of the CPU with the triangle and gently insert the CPU into position. (Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket in a straight and downwards motion. Avoid twisting or bending motions that might cause damage to the CPU during installation.)

Fig. 4
Once the CPU is properly inserted, please replace the load plate and push the metal lever back into its original position.

1-3-2 Installation of the Heatsink

Fig.1

Please apply an even layer of heatsink paste on the surface of the installed CPU.

Male Push Pin

The top of Female Push Pin
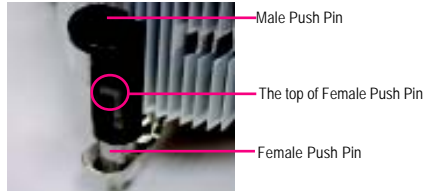
Female Push Pin

Fig. 2

(Turning the push pin along the direction of arrow is to remove the heatsink, on the contrary, is to install.)Please note the direction of arrow sign on the male push pin doesn't face inwards before installation. (This instruction is only for Intel boxed fan)
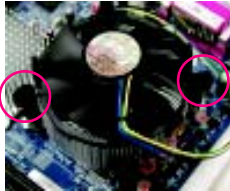
Fig. 3

Place the heatsink atop the CPU and make sure the push pins aim to the pin hole on the motherboard.Pressing down the push pins diagonally.

Fig. 4

Please make sure the Male and Female push pin are joined closely. (for detailed installation instructions, please refer to the heatsink installation section of the user manual)
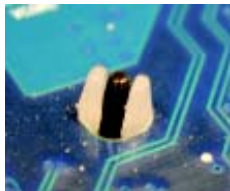
Fig. 5

Please check the back of motherboard after installing. If the push pin is inserted as the picture, the installation is complete.

Fig. 6

Finally, please attach the power connector of the heatsink to the CPU fan header located on the motherboard.

NOTE The heatsink may adhere to the CPU as a result of hardening of the heatsink paste.To prevent such an occurrence, it is suggested that either thermal tape rather than heat sink paste be used for heat dissipation or using extreme care when removing the heatsink.

1-4   Installation of Memory

 CAUTION

Before installing the memory modules, please comply with the following conditions:
1.   Please make sure that the memory used is supported by the motherboard. It is recommended that memory of similar capacity, specifications and brand be used.
2.   Before installing or removing memory modules, please make sure that the computer power is switched off to prevent hardware damage.
3.   Memory modules have a foolproof insertion design. A memory module can be installed in only one direction. If you are unable to insert the module, please switch the direction.

The motherboard supports DDR memory modules, whereby BIOS will automatically detect memory capacity and specifications. Memory modules are designed so that they can be inserted only in one direction. The memory capacity used can differ with each slot.

Notch

DDR
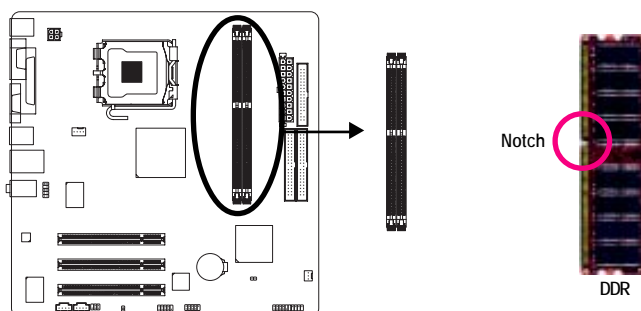
1.   The DIMM slot has a notch, so the DIMM memory module can only fit in one direction.
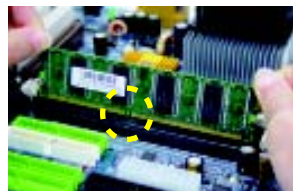
2.   Insert the DIMM memory module vertically into the DIMM slot. Then push it down.

3.   Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.
Reverse the installation steps when you wish to remove the DIMM module.

1-5 Install expansion cards

You can install your expansion card by following the steps outlined below:

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.

Installing a PCI expansion card:

1-6 I/O Back Panel Introduction
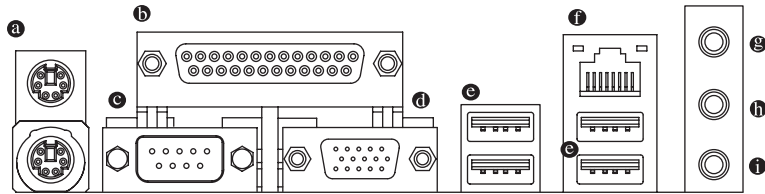
◎ PS/2 Keyboard and PS/2 Mouse Connector

To install a PS/2 port keyboard and mouse, plug the mouse to the upper port (green) and the keyboard o the lower port (purple).

◎ Parallel Port

The parallel port allows connection of a printer, scanner and other peripheral devices.

◎ COM A (Serial Port)

Connects to serial-based mouse or data processing devices.

◎ VGA Port

Monitor can be connected to VGA port.

◎ USB port

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

◎ LAN Port

The provided Internet connection is fast Ethernet, providing data transfer speeds of 10/100Mbps.

◎ Line In

Devices like CD-ROM, walkman etc. can be connected to Line In jack.

◎ Line Out

Connect the stereo speakers, earphone or front surround speakers to this connector.

◎ MIC In

Microphone can be connected to MIC In jack.

1-7   Connectors Introduction
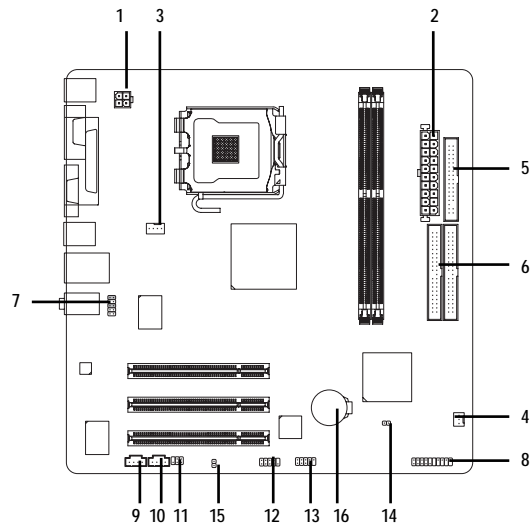
1)	ATX_12V	9)	CD_IN
2)	ATX (Power Connector)	10)	AUX_IN
3)	CPU_FAN	11)	SPDIF_IO
4)	SYS_FAN	12)	COMB
5)	FDD	13)	F_USB1
6)	IDE1 / IDE2	14)	CLR_CMOS
7)	F_AUDIO	15)	CI
8)	F_PANEL	16)	BAT

1/2) ATX_12V/ATX (Power Connector)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, please make sure that all components and devices are properly installed. Align the power connector with its proper location on the motherboard and connect tightly.

The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

Caution!

Please use a power supply that is able to handle the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start.

If you use a 24-pin ATX power supply, please remove the small cover on the power connector on the motherboard before plugging in the power cord ; Otherwise, please do not remove it.
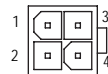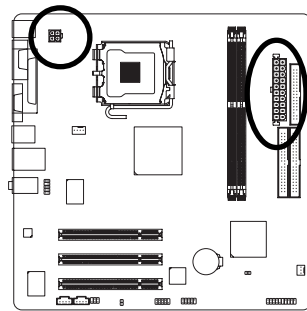
Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V
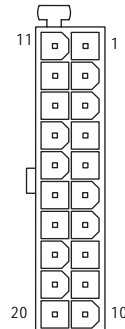
Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	Power Good
9	5V SB (stand by +5V)
10	+12V
11	3.3V
12	-12V
13	GND
14	PS_ON(soft on/off)
15	GND
16	GND
17	GND
18	-5V
19	+5V
20	+5V

3/4) CPU_FAN / SYS_FAN (Cooler Fan Power Connector)

The cooler fan power connector supplies a +12V power voltage via a 3-pin/4-pin (only for CPU_FAN) power connector and possesses a foolproof connection design.

Most coolers are designed with color-coded power connector wires. A red power connector wireindicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Please remember to connect the power to the cooler to prevent system overheating and failure. Caution!

Please remember to connect the power to the CPU fan to prevent CPU overheating and failure.

Pin No.	Definition
1	GND
2	+12V
3	Sense
4	Speed Control (Only for CPU_FAN)

CPU_FAN

SYS_FAN
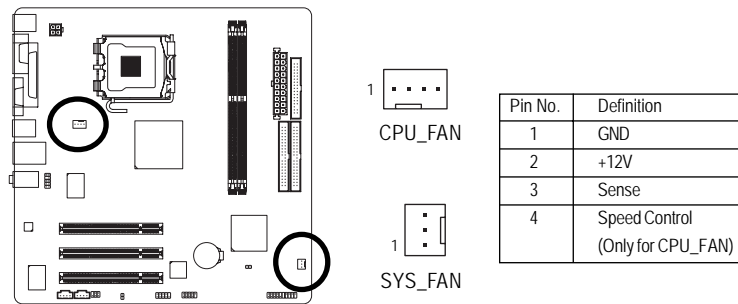
5) FDD (Floppy Connector)

The FDD connector is used to connect the FDD cable while the other end of the cable connects to the FDD drive. The types of FDD drives supported are: 360KB, 720KB, 1.2MB, 1.44MB and 2.88MB. Please connect the red power connector wire to the pin1 position.
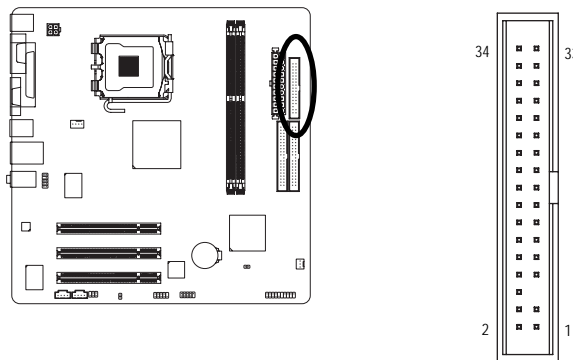
6) IDE1 / IDE2 (IDE1 / IDE2 Connector)

An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device).
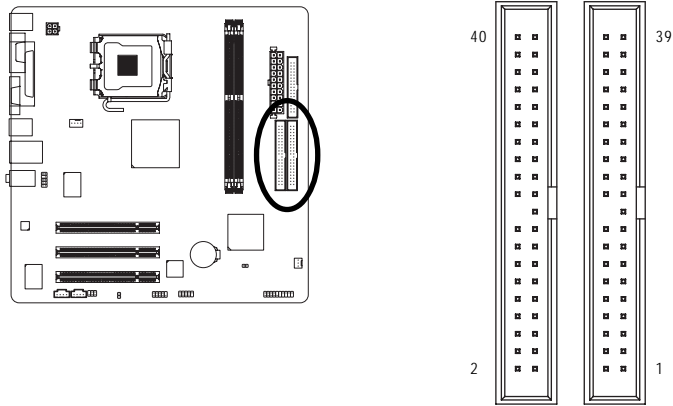
7) F_AUDIO (Front Audio Connector)

Please make sure the pin assignments on the cable are the same as the pin assignments of the F_AUDIO connector on the motherboard. To find out if the chassis you are buying support front audio panel connector, please contact your dealer. If you want to use "Front Audio" connector, you must remove the jumpers on pin 5-6, 9-10.

Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	Power
5	Front Audio (R)
6	Rear Audio (R)
7	NC
8	No Pin
9	Front Audio (L)
10	Rear Audio (L)
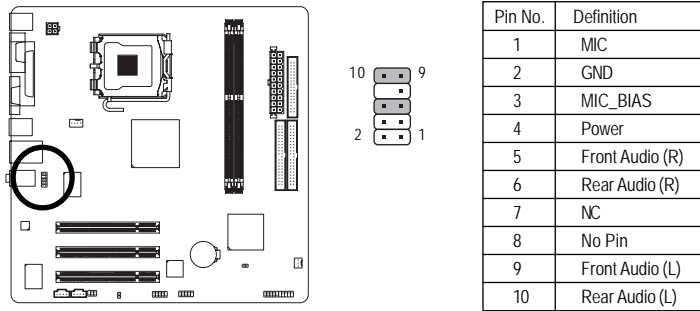
8) F_PANEL (Front Panel Jumper)

Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis frontpanel to the F_PANEL connector according to the pin assignment below.
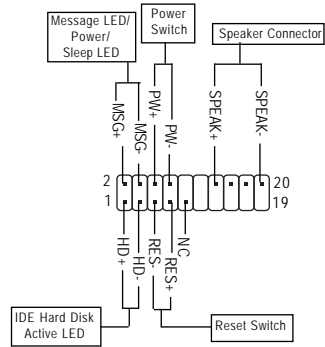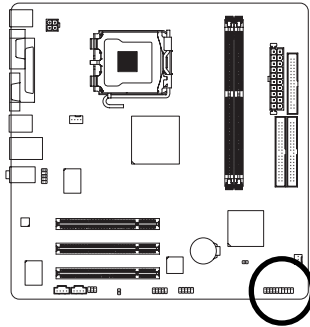
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
SPEAK (Speaker Connector)	Pin 1: Power
	Pin 2- Pin 3: NC
	Pin 4: Data(-)
RES (Reset Switch)	Open: Normal
	Close: Reset Hardware System
PW (Power Switch)	Open: Normal
	Close: Power On/Off
MSG(Message LED/Power/Sleep LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
NC	NC

9) CD_IN (CD IN)

Connect CD-ROM or DVD-ROM audio out to the connector.
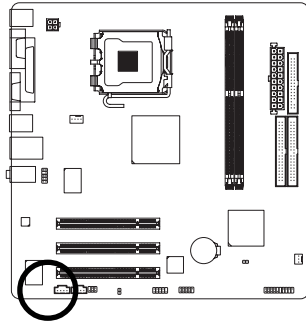
Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

10) AUX_IN (AUX In Connector)

Connect other device (such as PCI TV Tuner audio out) to the connector.
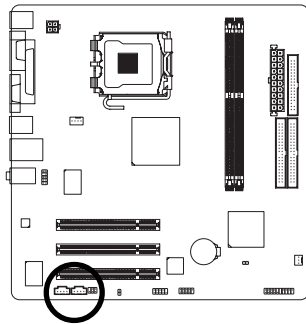
Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

11) SPDIF_IO (SPDIF In/Out Connector)

The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function. Be careful with the polarity of the SPDIF_IO connector. Check the pin assignment carefully while you connect the SPDIF_IO cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional SPDIF_IO cable, please contact your local dealer.
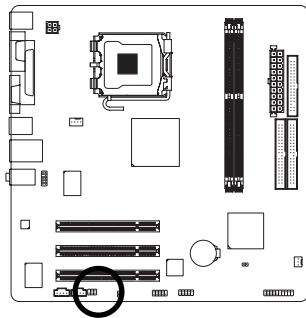
Pin No.	Definition
1	VCC
2	No Pin
3	SPDIF
4	SPDIFI
5	GND
6	GND

12) COMB (Serial Port Connector)

Be careful with the polarity of the COM connector. Check the pin assignment carefully while you connect the COM cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional COM cable, please contact your local dealer.
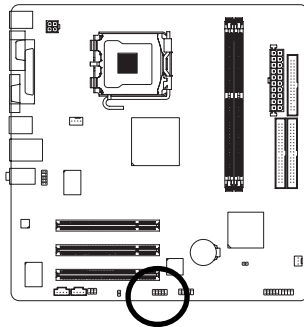
Pin No.	Definition
1	NDCDB-
2	NSIN B
3	NSOUT B
4	NDTR B-
5	GND
6	NDSR B-
7	NRTS B-
8	NCTS B-
9	NRI B-
10	No Pin

13) F_USB1 (Front USB Connector, Yellow)

Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.

2 ⬚⬚⬚⬚⬚ 10
1 ⬚⬚⬚⬚⬚ 9
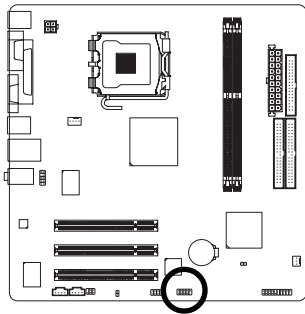
Pin No.	Definition
1	Power
2	Power
3	USB Dx-
4	USB Dy-
5	USB Dx+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

14) CLR_CMOS (Clear CMOS)

You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.
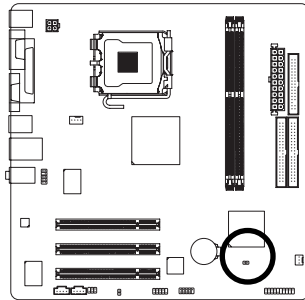
⬚⬚ 1   Open: Normal

⬚⬚ 1   Short :Clear CMOS

Hardware Installation

15) CI (CASE OPEN)

This 2-pin connector allows your system to enable or disable the "Case Open" item in BIOS, if the system case begin remove.
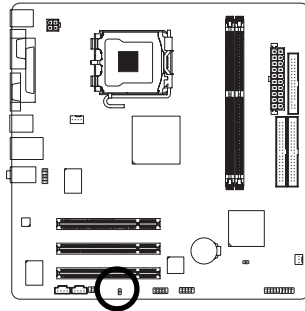
Pin No.	Definition
1	Signal
2	GND

1

16) BAT(Battery)

+
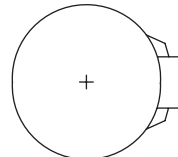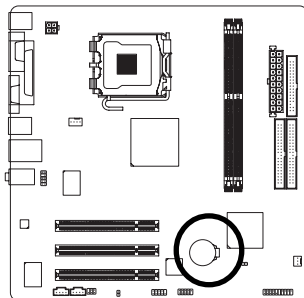
❖ Danger of explosion if battery is incorrectly replaced.

❖ Replace only with the same or equivalent type recommended by the manufacturer.

❖ Dispose of used batteries according to the manufacturer's instructions.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.

2. Remove the battery, wait for 30 second.

3. Re-install the battery.

4. Plug the power cord and turn ON the computer.

Chapter 2 BIOS Setup

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required settings or to activate certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the motherboard.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS SRAM.

When the power is turned on, pushing the <Del> button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing "Ctrl + F1".

When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings. If you wish to upgrade to a new BIOS, either Gigabyte's Q-Flash or @BIOS utility can be used.

Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system.

@BIOS is a Windows-based utility that does not require users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

CONTROL KEYS

< ↑ >< ↓ >< ← >< → >	Move to select item
<Enter>	Select Item
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the file-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F8>	Q-Flash utility
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu (For example: BIOS Ver. : E2)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

```
              CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ▶   Standard CMOS Features              Load Fail-Safe Defaults
   ▶   Advanced BIOS Features              Load Optimized Defaults
   ▶   Integrated Peripherals              Set Supervisor Password
   ▶   Power Management Setup              Set User Password
   ▶   PnP/PCI Configurations              Save & Exit Setup
   ▶   PC Health Status                    Exit Without Saving
   ▶   Frequency/Voltage Control

   ESC: Quit                               ↑↓→←: Select Item
   F8: Q-Flash                             F10: Save & Exit Setup
              Time, Date, Hard Disk Type...
```

NOTE

If you can't find the setting you want, please press "Ctrl+F1" to search the advanced option hidden.

Please Load Optimized Defaults in the BIOS when somehow the system works not stable as usual. This action makes the system reset to the default for stability.

■ **Standard CMOS Features**

This setup page includes all the items in standard compatible BIOS.

■ **Advanced BIOS Features**

This setup page includes all the items of Award special enhanced features.

■ **Integrated Peripherals**

This setup page includes all onboard peripherals.

■ **Power Management Setup**

This setup page includes all the items of Green function features.

■ **PnP/PCI Configuration**

This setup page includes all the configurations of PCI & PnP ISA resources.

■ **PC Health Status**

This setup page is the System auto detect Temperature, voltage, fan, speed.

■ **Frequency/Voltage Control**

This setup page is control CPU clock and frequency ratio.

■ **Load Fail-Safe Defaults**

Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.

■ **Load Optimized Defaults**

Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.

■ **Set Supervisor Password**

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- **Set User Password**

  Change, set, or disable password. It allows you to limit access to the system.

- **Save & Exit Setup**

  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

2-1 Standard CMOS Features

```
               CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
                              Standard CMOS Features

   Date (mm:dd:yy)                       Thu, Jan 20 2005    │ Item Help
   Time (hh:mm:ss)                       22:31:24            │ Menu Level ▶

 ▸ IDE Primary Master                    [None]              │ Change the day, month,
 ▸ IDE Primary Slave                     [None]              │ year
 ▸ IDE Secondary Master                  [None]              │
 ▸ IDE Secondary Slave                   [None]              │ <Week>
                                                             │ Sun. to Sat.

   Drive A                               [1.44M, 3.5"]       │ <Month>
   Drive B                               [None]              │ Jan. to Dec.
   Floppy 3 Mode Suport                  [Disabled]          │
                                                             │ <Day>
   Halt On                               [All, But Keyboard] │ 1 to 31 (or maximum
                                                             │ allowed in the month)
   Base Memory                           640K                │
   Extended Memory                       127M                │ <Year>
   Total Memory                          128M                │ 1999 to 2098


 ↑↓→←: Move      Enter: Select      +/-/PU/PD: Value    F10: Save    ESC: Exit    F1:General Help
            F5: Previous Values          F6: Fail-Safe Default        F7: Optimized Defaults
```

☞ **Date**

The date format is <week>, <month>, <day>, <year>.

  ▸ Week   The week, from Sun to Sat, determined by the BIOS and is display only

  ▸ Month   The month, Jan. Through Dec.

  ▸ Day   The day, from 1 to 31 (or the maximum allowed in the month)

  ▸ Year   The year, from 1999 through 2098

☞ **Time**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

☞ **IDE Primary/ Secondary Master, Slave**

  ▸ IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.

  ▸ IDE Primary/Secondary Master(Slave) IDE Device Setup. You can use one of three methods:

   Auto   Allows BIOS to automatically detect IDE devices during POST(default)

   None   Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.

   Manual   User can manually input the correct settings

  ▸ Access Mode Use this to set the access mode for the hard drive. The four options are:
                CHS/LBA/Large/Auto(default:Auto)

Hard drive information should be labeled on the outside drive casing. Enter the appropriate option based on this information.

  ▸ Cylinder   Number of cylinders

  ▸ Head   Number of heads

  ▸ Precomp   Write precomp

  ▸ Landing Zone   Landing zone

  ▸ Sector   Number of sectors

If a hard disk has not been installed, select NONE and press <Enter>.

☞ **Drive A / Drive B**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

- ▶ None   No floppy drive installed
- ▶ 360K, 5.25"   5.25 inch PC-type standard drive; 360K byte capacity.
- ▶ 1.2M, 5.25"   5.25 inch AT-type high-density drive; 1.2M byte capacity
                    (3.5 inch when 3 Mode is Enabled).
- ▶ 720K, 3.5"   3.5 inch double-sided drive; 720K byte capacity
- ▶ 1.44M, 3.5"   3.5 inch double-sided drive; 1.44M byte capacity.
- ▶ 2.88M, 3.5"   3.5 inch double-sided drive; 2.88M byte capacity.

☞ **Floppy 3 Mode Support (for Japan Area)**

- ▶ Disabled   Normal Floppy Drive. (Default value)
- ▶ Drive A   Drive A is 3 mode Floppy Drive.
- ▶ Drive B   Drive B is 3 mode Floppy Drive.
- ▶ Both   Drive A & B are 3 mode Floppy Drives.

☞ **Halt on**

The category determines whether the computer will stop if an error is detected during power up.

- ▶ No Errors   The system boot will not stop for any error that may be detected and you will be prompted.
- ▶ All Errors   Whenever the BIOS detects a non-fatal error the system will be stopped.
- ▶ All, But Keyboard The system boot will not stop for a keyboard error; it will stop for all other errors. (Default value)
- ▶ All, But Diskette The system boot will not stop for a disk error; it will stop for all other errors.
- ▶ All, But Disk/Key The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

☞ **Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

▶ **Base Memory**

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

▶ **Extended Memory**

The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

2-2 Advanced BIOS Features

```
                CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                              Advanced BIOS Features
   First Boot Device                      [Floppy]              Item Help
   Second Boot Device                     [Hard Disk]           Menu Level ▶
   Third Boot Device                      [CDROM]
    Boot Up Floppy Seek                   [Disabled]            Select Hard Disk Boot
   Password Check                         [Setup]               Device Priority
 # CPU Hyper-Threading                    [Enabled]
   Limit CPUID Max. to 3                  [Enabled]
   Init Display First                     [Onboard/AGP]
   Graphics Share Memory                  [8MB]
   Graphics Aperture Size                 [128MB]




 ↑↓→←: Move      Enter: Select      +/-/PU/PD: Value    F10: Save     ESC: Exit    F1: General Help
        F5: Previous Values            F6: Fail-Safe Default          F7: Optimized Defaults
```

> **NOTE** " # " System will detect automatically and show up when you install the Intel® Pentium® 4 processor with HT Technology.

☞ **First / Second / Third Boot Device**

▶▶ Floppy	Select your boot device priority by Floppy.
▶▶ LS120	Select your boot device priority by LS120.
▶▶ Hard Disk	Select your boot device priority by Hard Disk.
▶▶ CDROM	Select your boot device priority by CDROM.
▶▶ ZIP	Select your boot device priority by ZIP.
▶▶ USB-FDD	Select your boot device priority by USB-FDD.
▶▶ USB-ZIP	Select your boot device priority by USB-ZIP.
▶▶ USB-CDROM	Select your boot device priority by USB-CDROM.
▶▶ USB-HDD	Select your boot device priority by USB-HDD.
▶▶ LAN	Select your boot device priority by LAN.
▶▶ Disabled	Disable this function.

☞ **Boot Up Floppy Seek**

During POST, BIOS will determine the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks 720K, 1.2M and 1.44M are all 80 tracks.

▶▶ Enabled	BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks.
▶▶ Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K. (Default value)

☞ **Password Check**
- ▸ Setup   The system will boot but will not access to Setup page if the correct password is not entered at the prompt. (Default value)
- ▸ System   The system will not boot and will not access to Setup page if the correct password is not entered at the prompt.

☞ **CPU Hyper-Threading**
- ▸ Enabled   Enables CPU Hyper Threading Feature. Please note that this feature is only working for operating system with multi processors mode supported. (Default value)
- ▸ Disabled   Disables CPU Hyper Threading.

☞ **Limit CPUID Max. to 3**
- ▸ Enabled   Limit CPUID Maximum value to 3 when use older OS like NT4. (Default value)
- ▸ Disabled   Disables CPUID Limit for windows XP.

☞ **Init Display First**

Select the first initation of monitor or display from AGP or PCI VGA card.
- ▸ Onboard/AGP   Set Init display first to AGP. (Default value)
- ▸ PCI   Set Init display first to PCI.

☞ **Graphics Memory Size**
- ▸ 128MB   Driver use selected sized of system memory for 3D texturing to increase graphics performance. (Default value)
- ▸ Disabled   Disable onboard graphics chip function.

☞ **Graphics Share Memory**
- ▸ 8MB   Share 8MB system memory preallocated for frame buffer. (Default value)
- ▸ 1MB   Share 1MB system memory preallocated for frame buffer.

2-3   Integrated Peripherals

```
              CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                              Integrated Peripherals
     On-Chip Primary PCI IDE            [Enabled]            Item Help
     On-Chip Secondary PCI IDE          [Enabled]            Menu Level ▶
     IDE1 Conductor Cable               [Auto]
     IDE2 Conductor Cable               [Auto]
     USB  Controller                    [Enabled]
     USB Keyboard Support               [Disabled]
     USB Mouse Support                  [Disabled]
     AC97 Audio                         [Auto]
     Onboard H/W LAN                    [Enabled]
     Onboard Serial Port 1              [3F8/IRQ4]
     Onboard Serial Port 2              [2F8/IRQ3]
     UART Mode Select                   [Normal]
   x UR2 Duplex Mode                    [Half]
     Onboard Parallel Port              [378/IRQ7]
     Parallel Port Mode                 [SPP]
   x ECP Mode Use DMA                    3



   ↑↓→←: Move     Enter: Select    +/-/PU/PD: Value   F10: Save    ESC: Exit    F1:General Help
        F5: Previous Values          F6: Fail-Safe Default          F7: Optimized Defaults
```

☞ **On-Chip Primary PCI IDE**

▶ Enabled   Enable onboard 1st channel IDE port. (Default value)

▶ Disabled   Disable onboard 1st channel IDE port.

☞ **On-Chip Secondary PCI IDE**

▶ Enabled   Enable onboard 2nd channel IDE port. (Default value)

▶ Disabled   Disable onboard 2nd channel IDE port.

☞ **IDE1 Conductor Cable**

▶Auto   Will be automatically detected by BIOS. (Default Value)

▶ ATA66/100   Set IDE1 Conductor Cable to ATA66/100 (Please make sure your IDE
                  device and cable is compatible with ATA66/100).

▶ATA33   Set IDE1 Conductor Cable to ATA33 (Please make sure your IDE device
                  and cable is compatible with ATA33).

☞ **IDE2 Conductor Cable**

▶Auto   Will be automatically detected by BIOS. (Default Value)

▶ ATA66/100   Set IDE2 Conductor Cable to ATA66/100 (Please make sure your IDE
                  device and cable is compatible with ATA66/100).

▶ATA33   Set IDE2 Conductor Cable to ATA33 (Please make sure your IDE device
                  and cable is compatible with ATA33).

☞ **USB Controller**

▶ Enabled   Enable USB Controller. (Default value)

▶ Disabled   Disable USB Controller.

☞ **USB Keyboard Support**
- ▸ Enabled   Enable USB Keyboard Support.
- ▸ Disabled   Disable USB Keyboard Support. (Default value)

☞ **USB Mouse Support**
- ▸ Enabled   Enable USB Mouse Support.
- ▸ Disabled   Disable USB Mouse Support. (Default value)

☞ **AC97 Audio**
- ▸ Auto   Enable onboard AC'97 audio function. (Default Value)
- ▸ Disabled   Disable this function.

☞ **Onboard H/W LAN**
- ▸ Enabled   Enable Onboard H/W LAN function. (Default value)
- ▸ Disabled   Disable this function.

☞ **Onboard Serial Port 1**
- ▸ Auto   BIOS will automatically setup the port 1 address.
- ▸ 3F8/IRQ4   Enable onboard Serial port 1 and address is 3F8/IRQ4. (Default value)
- ▸ 2F8/IRQ3   Enable onboard Serial port 1 and address is 2F8/IRQ3.
- ▸ 3E8/IRQ4   Enable onboard Serial port 1 and address is 3E8/IRQ4.
- ▸ 2E8/IRQ3   Enable onboard Serial port 1 and address is 2E8/IRQ3.
- ▸ Disabled   Disable onboard Serial port 1.

☞ **Onboard Serial Port 2**
- ▸ Auto   BIOS will automatically setup the port 2 address.
- ▸ 3F8/IRQ4   Enable onboard Serial port 2 and address is 3F8/IRQ4.
- ▸ 2F8/IRQ3   Enable onboard Serial port 2 and address is 2F8/IRQ3. (Default value)
- ▸ 3E8/IRQ4   Enable onboard Serial port 2 and address is 3E8/IRQ4.
- ▸ 2E8/IRQ3   Enable onboard Serial port 2 and address is 2E8/IRQ3.
- ▸ Disabled   Disable onboard Serial port 2.

☞ **UART Mode Select**
This item allows you to determine which Infra Red(IR) function of Onboard I/O chip.
- ▸ Normal   Set onboard I/O chip UART to Normal Mode. (Default Value)
- ▸ ASKIR   Set onboard I/O chip UART to ASKIR Mode.
- ▸ IrDA   Set onboard I/O chip UART to IrDA Mode.

☞ **UR2 Duplex Mode**
This feature allows you to seclect IR mode.
This function will available when "UART Mode Select" doesn't set at Normal.
- ▸ Half   IR Function Duplex Half. (Default value)
- ▸ Full   IR Function Duplex Full.

☞ **Onboard Parallel port**
- ▸ Disabled   Disable onboard LPT port.
- ▸ 378/IRQ7   Enable onboard LPT port and address is 378/IRQ7. (Default value)
- ▸ 278/IRQ5   Enable onboard LPT port and address is 278/IRQ5.
- ▸ 3BC/IRQ7   Enable onboard LPT port and address is 3BC/IRQ7.

☞ **Parallel Port Mode**
- ➠ SPP   Using Parallel port as Standard Parallel Port. (Default value)
- ➠ EPP   Using Parallel port as Enhanced Parallel Port.
- ➠ ECP   Using Parallel port as Extended Capabilities Port.
- ➠ ECP+EPP   Using Parallel port as ECP & EPP mode.

☞ **ECP Mode Use DMA**
- ➠ 3   Set ECP Mode Use DMA to 3. (Default value)
- ➠ 1   Set ECP Mode Use DMA to 1.

2-4 Power Management Setup

```
            CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                           Power Management Setup
   ACPI Suspend Type              [S1(POS)]              Item Help
   Soft-Off by PWR-BTTN           [Instant-off]          Menu Level ▶
   PME Event Wake Up              [Enabled]
   Modem Ring On                  [Enabled]
   Resume by Alarm                [Disabled]
  x  Date (of Month) Alarm         Everyday
  x  Time (hh:mm:ss) Alarm         0 : 0 : 0
   Power On By Mouse              [Disabled]
   Power On By Keyboard           [Disabled]
  x  KB Power ON Password          Enter
   AC Back Function               [Soft-Off]




   ↑↓→←: Move      Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help
       F5: Previous Values           F6: Fail-Safe Default          F7: Optimized Defaults
```

☞ **ACPI Suspend Type**
- ➠ S1(POS)   Set ACPI suspend type to S1/POS(Power On Suspend). (Default value)
- ➠ S3(STR)   Set ACPI suspend type to S3/STR(Suspend To RAM).

☞ **Soft-off by PWR-BTTN**
- ➠ Instant-off   Press power button then Power off instantly. (Default value)
- ➠ Delay 4 Sec.   Press power button 4 sec. to Power off. Enter suspend if button is pressed less than 4 sec.

☞ **PME Event Wake Up**
- ➠ Disabled   Disable this function.
- ➠ Enabled   Enable PME Event Wake up. (Default value)

☞ **Modem Ring On**
- ➠ Disabled   Disable Modem Ring On function.
- ➠ Enabled   Enable Modem Ring On function. (Default value)

☞ **Resume by Alarm**

You can set "Resume by Alarm" item to enabled and key in Date/time to power on system.

▸▸ Disabled   Disable this function. (Default value)

▸▸ Enabled   Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

▸▸ Date (of Month) Alarm :   Everyday, 1~31

▸▸ Time (hh: mm: ss) Alarm :   (0~23) : (0~59) : (0~59)

☞ **Power On By Mouse**

▸▸ Disabled   Disable this function. (Default value)

▸▸ Double Click   Double click on PS/2 mouse left button to power on the system.

☞ **Power On By Keyboard**

▸▸ Password   Enter from 1 to 5 characters to set the Keyboard Power On Password.

▸▸ Disabled   Disabled this function. (Default value)

▸▸ Keyboard 98   If your keyboard have "POWER Key" button, you can press the key to power on the system.

☞ **KB Power ON Password**

When "Power On by Keyboard" set at Password, you can set the password here.

▸▸ Enter   Input password (from 1 to 5 characters) and press Enter to set the Keyboard Power On password.

☞ **AC Back Function**

▸▸ Soft-Off   When AC-power back to the system, the system will be in "Off" state. (Default value)

▸▸ Full-On   When AC-power back to the system, the system always in "On" state.

▸▸ Memory   When AC-power back to the system, the system will return to the Last state before AC-power off.

2-5   PnP/PCI Configurations

```
         CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                         PnP/PCI Configurations
  PCI 1 IRQ Assignment              [Auto]              Item Help
  PCI 2 IRQ Assignment              [Auto]           Menu Level ▶
  PCI 3 IRQ Assignment              [Auto]




  ↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save   ESC: Exit   F1:General Help
       F5: Previous Values        F6: Fail-Safe Default           F7: Optimized Defaults
```
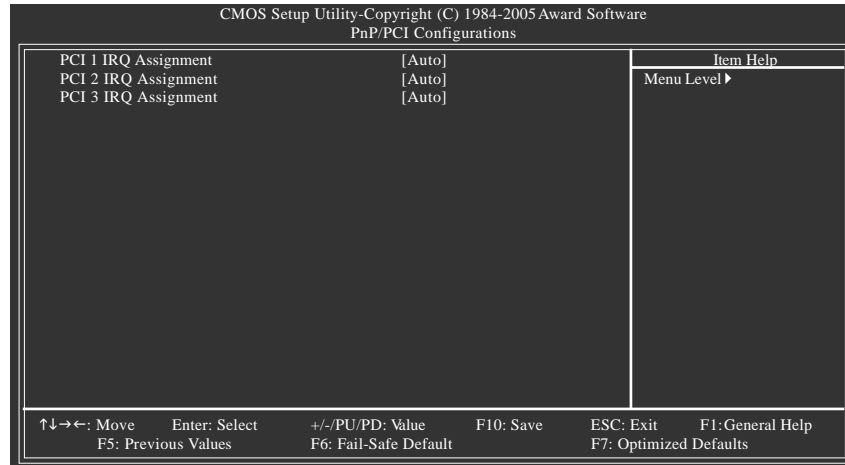
☞ **PCI 1 IRQ Assignment**
  ➡ Auto   Auto assign IRQ to PCI 1. (Default value)
  ➡ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1.

☞ **PCI 2 IRQ Assignment**
  ➡ Auto   Auto assign IRQ to PCI 2. (Default value)
  ➡ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 2.

☞ **PCI 3 IRQ Assignment**
  ➡ Auto   Auto assign IRQ to PCI 3. (Default value)
  ➡ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 3.

2-6   PC Health Status

```
                  CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                                     PC Health Status
    Reset Case Open Status                [Disabled]               Item Help
    Case Opened                           No                     Menu Level ▶
    Vcore                                 OK
    2_5VSTR                               OK
    +3.3V                                 OK
    +12V                                  OK
    Current CPU Temperature               33ºC
    Current CPU FAN Speed                 4687 RPM
    Current SYSTEM FAN Speed              0    RPM
    CPU Warning Temperature               [Disabled]
    CPU FANFail Warning                   [Disabled]
    SYSTEM FANFail Warning                [Disabled]
    CPU Smart FAN Control                 [Enabled]




    ↑↓→←: Move    Enter: Select      +/-/PU/PD: Value    F10: Save    ESC: Exit    F1:General Help
         F5: Previous Values          F6: Fail-Safe Default         F7: Optimized Defaults
```

☞ **Reset Case Open Status**
- ▶ Disabled   Don't reset case open status. (Default value)
- ▶ Enabled   Clear case open status at next boot.

☞ **Case Opened**

   If the case is closed, "Case Opened" will show "No".

   If the case have been opened, "Case Opened" will show "Yes".

   If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save

   CMOS, your computer will restart.

☞ **Current Voltage(V) Vcore / 2_5VSTR / +3.3V / +12V**
- ▶ Detect system's voltage status automatically.

☞ **Current CPU Temperature**
- ▶ Detect CPU temperature automatically.

☞ **Current CPU/SYSTEM FAN Speed (RPM)**
- ▶ Detect CPU/SYSTEM Fan speed status automatically.

☞ **CPU Warning Temperature**
- ▶ 60ºC / 140ºF   Monitor CPU temperature at 60ºC / 140ºF.
- ▶ 70ºC / 158ºF   Monitor CPU temperature at 70ºC / 158ºF.
- ▶ 80ºC / 176ºF   Monitor CPU temperature at 80ºC / 176ºF.
- ▶ 90ºC / 194ºF   Monitor CPU temperature at 90ºC / 194ºF.
- ▶ Disabled   Disable this function. (Default value)

☞ **CPU/SYSTEM FAN Fail Warning**
 ‣ Disabled   Fan warning function disable. (Default value)
 ‣ Enabled   Fan warning function enable.

☞ **CPU Smart FAN Control**
 ‣ Disabled   Disable this function.
 ‣ Enabled   Enable CPU Smart Fan control function. (Default value)
        a.   When the CPU temperature is higher than 65 degrees Celsius, CPU fan
            will run at full speed.
        b.   The speed of CPU fan will increase linearly depand on the temperature
            if the temperature is more than 41 degree and less than 65 degree.
        c.   When the CPU temperature is lower than 40 degrees Celsius, CPU fan
            willbe disable.

2-7 Frequency/Voltage Control

```
             CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                          MB Intelligent Tweaker(M.I.T.)
   CPU Clock Ratio                    [15X]                    Item Help
   CPU Host Clock Control             [Disabled]            Menu Level ▶
 X CPU Host Frequency (Mhz)           133
 X Fixed  PCI/AGP Frequency           33/66
   Host/DRAM clock ratio              [Auto]
 X Memory Frequency (Mhz)             333
 X PCI/AGP Frequency (Mhz)            33/66




   ↑↓→←: Move      Enter: Select     +/-/PU/PD: Value    F10: Save     ESC: Exit      F1:General Help
        F5: Previous Values          F6: Fail-Safe Default          F7: Optimized Defaults
```

⚠ **CAUTION**   Incorrect using these features may cause your system broken. For power end-user use only.

☞ **CPU Clock Ratio**
 This setup option will automatically assign by CPU detection.
 The option will display "Locked" and read only if the CPU ratio is not changeable.

☞ **CPU Host Clock Control**

Note: If system hangs up before enter CMOS setup utility, wait for 20 sec for times out reboot. When time out occur, system will reset and run at CPU default Host clock at next boot.

➡ Disabled   Disable CPU Host Clock Control. (Default value)

➡ Enabled   Enable CPU Host Clock Control.

☞ **CPU Host Frequency (MHz)**

➡ 100MHz ~ 355MHz   Set CPU Host Clock from 100MHz to 355MHz.

Incorrect using it may cause your system broken. For power End-User use only!

☞ **Fixed PCI/AGP Frequency(Mhz)**

➡ Fixed PCI/AGP frequency.

☞ **Host/DRAM Clock Ratio**

(Warning: wrong frequency may make system can't boot, clear CMOS to overcome wrong frequency issue)

➡ 2.0   Memory Frequency = Host clock X 2.0.

➡ 2.5   Memory Frequency = Host clock X 2.5.

➡ Auto   Set Memory frequency by DRAM SPD data. (Default value)

☞ **Memory Frequency (Mhz)**

The values depend on "Memory Frequency For" item.

☞ **PCI/AGP Frequency(Mhz)**

➡ The values depend on PCI/AGP frequency.

2-8 Load Fail-Safe Defaults

```
                    CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ▶  Standard CMOS Features                    Load Fail-Safe Defaults
   ▶  Advanced BIOS Features                    Load Optimized Defaults
   ▶  Integrated Peri pherals                   Set Supervisor Password
   ▶  Power Ma              S                    S   U   P
   ▶  PnP/PCI C  ┌──────── Load Fail-Safe Defaults (Y/N)? N ────────┐
   ▶  PC Health Status  └───────────────────────────────────────────┘  Saving
   ▶  Frquency/Voltage Control

   ESC: Quit                                     ↑↓→←: Select Item
   F8: Q-Flash                                   F10: Save & Exit Setup
                            Load Fail-Safe Defaults
```

Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

2-9 Load Optimized Defaults

```
                    CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ▶  Standard CMOS Features                    Load Fail-Safe Defaults
   ▶  Advanced BIOS Features                    Load Optimized Defaults
   ▶  Integrated Peri pherals                   Set Supervisor Password
   ▶  Power Ma              S  ┌──── Load Opti mized Defaults (Y/N)? N ────┐
   ▶  PnP/PCI C               └────────────────────────────────────────────┘
   ▶  PC Health Status                                        Saving
   ▶  Frequency/Voltage Control

   ESC: Quit                                     ↑↓→←: Select Item
   F8: Q-Flash                                   F10: Save & Exit Setup
                            Load Optimized Defaults
```

Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

2-10 Set Supervisor/User Password

```
              CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
    ▶   Standard CMOS Features                    Load Fail-Safe Defaults
    ▶   Advanced BIOS Features                     Load Optimized Defaults
    ▶   Integrated Peri pherals                    Set Supervisor Password
    ▶   Power Ma                                    Set User Password
    ▶   PnP/PCI C        Enter Password:
    ▶   PC Health
    ▶   Frequency/Voltage Control

    ESC: Quit                           ↑↓→←: Select Item
    F8: Q-Flash                         F10: Save & Exit Setup
              Change/Set/Disa ble Password
```

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords:

SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "System" at "Password Check" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

2-11 Save & Exit Setup

```
                    CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
    ►    Standard CMOS Features                    Load Fail-Safe Defaults
    ►    Advanced BIOS Features                     Load Optimized Defaults
    ►    Integrated Peri pherals                    Set Supervisor Password
    ►    Power Management Setup                      Set User Password
    ►    PnP/PCI Configurations                      Save & Exit Setup
    ►    PC Health         Save to CMOS and EXIT (Y/N)?Y
    ►    Frequency/Voltage Control

    ESC: Quit                                    ↑↓→←: Select Item
    F8: Q-Flash                                  F10: Save & Exit Setup
                                Save & Exit Setup
```

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

2-12 Exit Without Saving

```
                    CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
    ►    Standard CMOS Features                    Load Fail-Safe Defaults
    ►    Advanced BIOS Features                     Load Optimized Defaults
    ►    Integrated Peri pherals                    Set Supervisor Password
    ►    Power Ma                                   Set User Password
    ►    PnP/PCI C         Quit Without Saving (Y/N)? N
    ►    PC Health Status                           Exit Without Saving
    ►    Frequency/Voltage Control

    ESC: Quit                                    ↑↓→←: Select Item
    F8: Q-Flash                                  F10: Save & Exit Setup
                                Abandon all Data
```

Type "Y" will quit the Setup Utility without saving to RTC CMOS.
Type "N" will return to Setup Utility.

Chapter 3 Install Drivers

3-1   Install Chipset Drivers

NOTE **Pictures below are shown in Windows XP**

Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

This page shows the drivers that need to be installed for the system. Click each item to install the driver manually or switch to the ![Xpress Install] to install the drivers automatically.
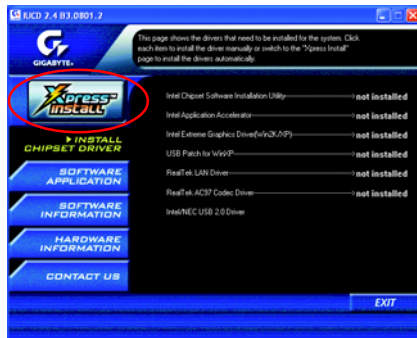
The "Xpress Install" uses the"Click and Go" technology to install the drivers automatically. Just select the drivers you want then click the "GO" button. The ![Xpress Install] will finish the installation for you automatically.
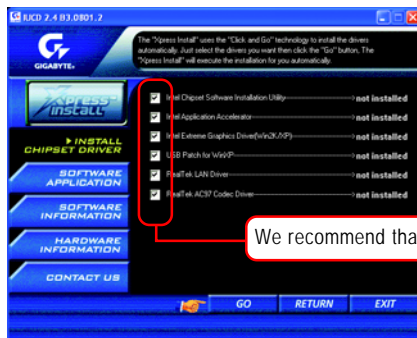
NOTE Massage: Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers.

We recommend that you install all components in the list.
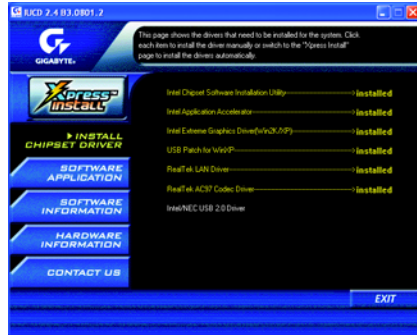
Driver install finished !
You have to reboot system !

Item Description

- Intel Chipset Software Installation Utility
  Tell the operating system how the chipset components will be configured.
- Intel Application Accelerator
  Designed to improve performance of the storage sub-system and overall system performance.
- Intel Extreme Graphics Driver
  For Intel® 845G/GL/GE/GV Chipsets.
- USB Patch for WinXP
  This patch driver can help you to resolve the USB device wake up S3 hang up issue in XP.
- RealTek LAN Driver
  Realtek 10/100 driver for 81XX series chipset.
- RealTek AC97 Codec Driver
  For Intel® ICH/ICH2/ICH4/ICH5 AC97 audio.
- USB Driver Patch
  This patch driver can help you to resolve some USB device issue on XP.
- Intel/NEC USB 2.0 Driver
  It is recommended that you use the Microsoft Windows update for the most updated driver for XP/2K.

For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

3-2   Software Application

This page reveals the value-added software developed by Gigabyte and its worldwide partners.

- ■ Gigabyte Windows Utilities Manager (GWUM)

  This utility can integrate the Gigabyte's applications in the system tray

- ■ Gigabyte Management Tool (GMT)

  A useful tool which can manage the computer via the network

- ■ EasyTune 4

  Powerful utility that integrates the overclocking and hardware monitoring functions

- ■ DMI Viewer

  Windows based utility which is used to browse the DMI/SMBIOS information of the system

- ■ Face-Wizard

  New utility for adding BIOS logo

- ■ @BIOS

  Gigabyte windows flash BIOS utility

- ■ Acrobat e-Book

  Useful utility from Adobe

- ■ Acrobat Reader

  Popular utility from Adobe for reading .PDF file format documents

- ■ Norton Internet Security (NIS)

  Integrated utility which includes anti-virus, ads, etc.

- ■ DirectX 9.0

  Install Microsoft DirectX 9 to enable 3D hardware acceleration that support for operating system to achieve better 3D performence.

3-3 Software Information

This page list the contects of softwares and drivers in this CD title.

3-4 Hardware Information

This page lists all device you have for this motherboard.

Chapter 4 Appendix

4-1   Unique Software Utilities

4-1-1   EasyTune 4 Installation

Powerful utility that integrates the overclocking and hardware monitoring functions

1. Click "EasyTune4" item.

(1)

2. Click "Next".

(2)

3. Click "Finish" to restart computer.

(3)

4. Right Click the icon to
   start "EasyTune 4".

(4)

Hardware
Monitoring

Threshold Setting   CPU Display

CPU   System Bus   Minimize
Multiplier   Tunner   Power Off

5. Click "HELP".

1400.01 MHz

Voltage   Frequency   Help   System   About   Go Button
Tunner   Tunner   Button   Display   GIGABYTE
                              Mode
                              Settings
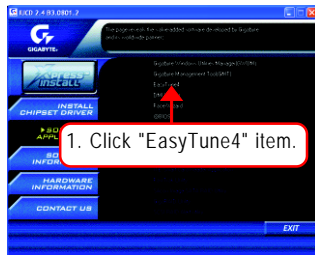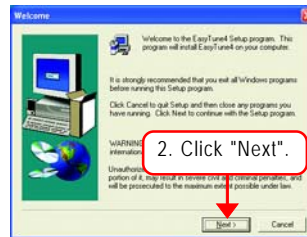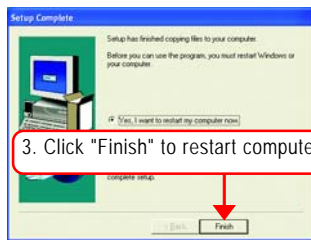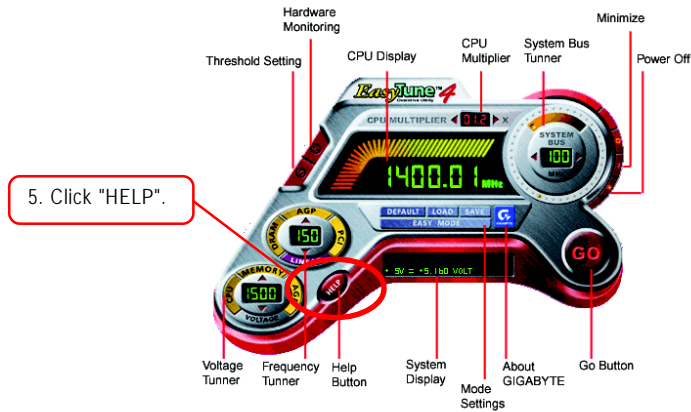
4-1-2　Xpress Recovery Introduction

What is Xpress Recovery ?

Xpress Recovery is a utility used to back up and restore an OS partition. If the hard drive is not working properly, the user can restore the drive to its original state.

⚠️ **CAUTION**

1. Supports FAT16, FAT32, and NTFS formats
2. Must be connected to the IDE1 Master
3. Allows installation of only one OS
4. Must be used with an IDE hard disk supporting HPA
5. The first partition must be set as the boot partition. When the boot partition is backed up, please do not alter its size.
6. Xpress Recovery is recommended when using Ghost to return boot manager to NTFS format.

How to use the Xpress Recovery

1. Boot from CD-ROM (BMP Mode)

    Enter the BIOS menu, select "Advanced BIOS Feature" and set to boot from CD-ROM. Insert the provided driver CD into your CD drive, then save and exit the BIOS menu. Once the computer has restarted, the phrase "Boot from CD:" will appear at the bottom left-hand corner of the screen. When "Boot from CD:" appears, press any key to enter Xpress Recovery.

    Once you have completed this step, subsequent access to Xpress Recovery can also function by pressing the F9 key during computer power on.

```
.
.
Verifying DMI Pool Data
Boot from CD:
```
Boot from CD:

Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO., Ltd.

1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart

Build 2011
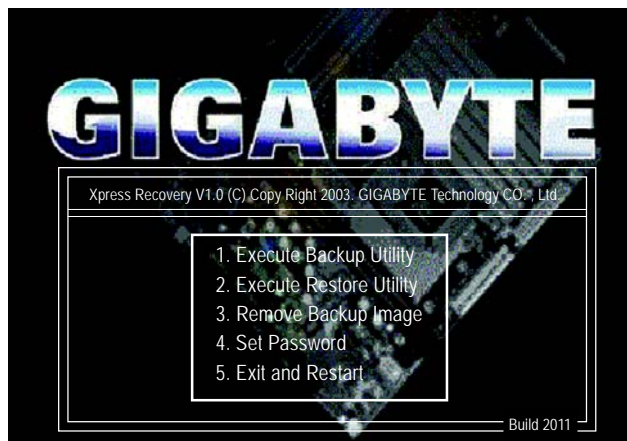
2. Press F9 during powering on the computer. (Text Mode)
   Press F9 during powering on the computer .

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2004, Award Software, Inc.

Intel 865PE AGPSet BIOS for 8IPE1000MT F1
Check System Health OK
.
.
.
Press DEL to enter SETUP / Q-Flash, F9 For Xpress Recovery
08/16/2002-I845GE-6A69YG01C-00

F9 For Xpress Recovery

GIGA-BYTE

Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO. , Ltd.

1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart

NOTE

1. If you have already entered Xpress Recovery by booting from the CD-ROM, you can enter Xpress Recovery in the future by pressing the F9 key.
2. System storage capacity as well as drive reading/writing speed will affect backup speed.
3. It is recommended that Xpress Recovery be immediately installed after OS and all required driver and software installations are complete.

1. Execute Backup Utility:

✎ Press B to Backup your System or Esc to Exit

The backup utility will automatically scan your system and back up data as a backup image in your hard drive.

⚠ CAUTION

Not all systems support access to Xpress Recovery by pressing the F9 key during computer power on. If this is the case, please use the boot from CD-ROM method to enter Xpress Recovery.

2. Execute Restore Utility:

✎ This program will recover your system to factory default.

Press R to restore your system back to factory default or press Esc to exit

Restores backup image to original state.

3. Remove Backup Image:

✎ Remove backup image. Are you sure? (Y/N)

Remove the backup image.

4. Set Password:

✎ Please input a 4-16 character long password (a-z or 0-9) or press Esc to exit

You can set a password to enter Xpress Recovery to protect your hard disk data. Once this is done, password input will be required to enter Xpress Recovery during the next as well as subsequent system restarts. If you wish to remove the need for password entry, please select "Set Password" and under "New Password/Confirm Password", make sure there is no entry and then press "Enter" to remove password requirement.

5. Exit and Restart:

Exit and restart your computer.

4-1-3 Flash BIOS Method Introduction

Method 1 : Q-Flash™ Utility

Q-Flash™ is a BIOS flash utility embedded in Flash ROM. With this utility, users only have to stay in the BIOS menu when they want to update BIOS. Q-Flash?allows users to flash BIOS without any utility in DOS or Windows. Using Q-Flash™ indicating no more fooling around with any complicated instructions and operating system since it is in the BIOS menu.

⚠ **CAUTION**
Please note that because updating BIOS has potential risk, please do it with caution!! We are sorry that Gigabyte Technology Co., Ltd is not responsible for damages of system because of incorrect manipulation of updating BIOS to avoid any claims from end-users.

Before You Begin:

Before you start updating BIOS with the Q-Flash™ utility, please follow the steps below first.

1. Download the latest BIOS for your motherboard from Gigabyte's website.
2. Extract the BIOS file downloaded and save the BIOS file (the one with model name.Fxx. For example, 8KNXPU.Fba) to a floppy disk.
3. Reboot your PC and press **Del** to enter BIOS menu.

The BIOS upgrading guides below are separated into two parts.
If your motherboard has dual-BIOS, please refer to **Part One**.
If your motherboard has single-BIOS, please refer to **Part Two**.

Part One:

Updating BIOS with Q-Flash™ Utility on Dual BIOS Motherboards.

Some of Gigabyte motherboards are equipped with dual BIOS. In the BIOS menu of the motherboards supporting Q-Flash and Dual BIOS, the Q-Flash utility and Dual BIOS utility are combined in the same screen. This section only deals with how to use Q-Flash utility.
In the following sections, we take GA-8KNXP Ultra as the example to guide you how to flash BIOS from an older version to the latest version. For example, from Fa3 to Fba.

The BIOS file is Fa3 before updating

```
Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.

Intel i875P AGPset BIOS for 8KNXP Ultra Fa3
Check System Health OK , Vcore = 1.5250
Main Processor : Intel Pentium(R) 4  1.6GHz (133x12)
<CPUID : 0F27 Patch ID  : 0027>
Memory Testing  : 131072K OK

Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None



Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For
Xpress Recovery
08/07/2003-i875P-6A79BG03C-00
```

Entering the Q-Flash™ utility:

Step1: To use Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Management Setup	Set Supervisor Password
▶ PnP/PCI Configurations	Set User Password
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Step 2: Press **F8** button on your keyboard and then **Y** button to enter the Dual BIOS/Q-Flash utility.

Exploring the Q-Flash™ / Dual BIOS utility screen

The Q-Flash / Dual BIOS utility screen consists of the following key components.

```
                        Dual BIOS Utility                          ──── Dual BIOS utility bar
        Boot From........................................  Main Bios
        Main ROM Type/Size............................SST 49LF003A      512K
         Backup ROM Type/Size........................SST 49LF003A      512K

                Wide Range Protection    Disable
                           Boot From     Main Bios
Task menu for           Auto Recovery    Enable
Dual BIOS                Halt On Error    Disable
utility           Copy Main ROM Data to Backup
                        Load Default Settings
                       Save Settings to CMOS
                        Q-Flash Utility                            ──── Q-Flash™ utility title
                   Load Main BIOS from Floppy                           bar
Task menu for     Load Backup BIOS from Floppy
Q-Flash™ utility   Save Main BIOS to Floppy
                   Save Backup BIOS to Floppy
        Enter : Run    ↑↓:Move    ESC:Reset    F10:Power Off     ──── Action bar
```

Task menu for Dual BIOS utility:

Contains the names of eight tasks and two item showing information about the BIOS ROM type. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Task menu for Q-Flash utility:

Contains the names of four tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash/Dual BIOS utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

1. Press arrow buttons on your keyboard to move the light bar to "Load Main BIOS from Floppy" item in the Q-Flash menu and press Enter button.
   Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

   NOTE If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save Main BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press **Enter**.

   In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8KNXPU.Fba, is listed.

   CAUTION Please confirm again you have the correct BIOS file for your motherboard.

```
                   Dual BIOS Utility
Boot From.......................         Main Bios
Main ROM Type/Size............................SST 49LF003A       512K
 Backup ROM Type/Size........................SST 49LF003A       512K

              Wide Range Prot                Disable
                          1 file(s) found
   8KNXPU.Fba                          512K        ─── BIOS file in the floppy
                                                        disk.
   Total size : 1.39M            Free size : 911.50K
   F5 : Refresh                  DEL : Delete
                          Save Settings to CMOS
                   Q-Flash Utility
                 Load Main BIOS from Floppy
                 Load Backup BIOS from Floppy
                  Save Main BIOS to Floppy
                  Save Backup BIOS to Floppy
   Enter : Run     ↑↓:Move      ESC:Reset      F10:Power Off
```

After pressing **Enter**, you'll then see the progress of reading the BIOS file from the floppy disk.

```
                   Dual BIOS Utility
Boot From.......................         Main Bios
Main ROM Type/Size............................SST 49LF003A       512K
 Backup ROM Type/Size........................SST 49LF003A       512K

              Wide Range Protection    Disable

   Reading BIOS file from floppy ...
   >>>>>>>>>>>>>>>....................

   Don't Turn Off Power or Reset System
                          Save Settings to CMOS
                   Q-Flash Utility
                 Load Main BIOS from Floppy
                 Load Backup BIOS from Floppy
                  Save Main BIOS to Floppy
                  Save Backup BIOS to Floppy
   Enter : Run     ↑↓:Move      ESC:Reset      F10:Power Off
```

CAUTION Do not trun off power or reset your system at this stage!!

After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

3. Press Y button on your keyboard after you are sure to update BIOS.

Then it will begin to update BIOS. The progress of updating BIOS will be displayed.

⚠ **CAUTION** Please do not take out the floppy disk when it begins flashing BIOS.

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

```
                    Dual BIOS Utility
Boot From........................          Main Bios
Main ROM Type/Size............SST 49LF003A          512K
 Backup ROM Type/Size.........SST 49LF003A          512K

          Wide Range Protection    Disable
      ┌─────────────────────────────────────┐
      │    !! Copy BIOS completed - Pass !!  │
      │                                      │
      │    Please press any key to continue  │
      └─────────────────────────────────────┘
                  Save Settings to CMOS
                    Q-Flash Utility
                Load Main BIOS from Floppy
                Load Backup BIOS from Floppy
                 Save Main BIOS to Floppy
                 Save Backup BIOS to Floppy
   Enter : Run      ↑↓:Move      ESC:Reset      F10:Power Off
```

😊 **NOTE** You can repeat Step 1 to 4 to flash the backup BIOS, too.

5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.

```
                    Dual BIOS Utility
Boot From........................          Main Bios
Main ROM Type/Size............SST 49LF003A          512K
 Backup ROM Type/Size.........SST 49LF003A          512K

          Wide Range Protection    Disable
      ┌─────────────────────────────────────┐
      │         Are you sure to RESET ?      │
      │                                      │
      │  [Enter] to continure or [Esc] to abort... │
      └─────────────────────────────────────┘
                  Save Settings to CMOS
                    Q-Flash Utility
                Load Main BIOS from Floppy
                Load Backup BIOS from Floppy
                 Save Main BIOS to Floppy
                 Save Backup BIOS to Floppy
   Enter : Run      ↑↓:Move      ESC:Reset      F10:Power Off
```
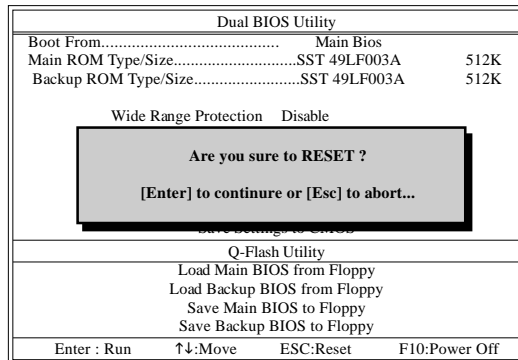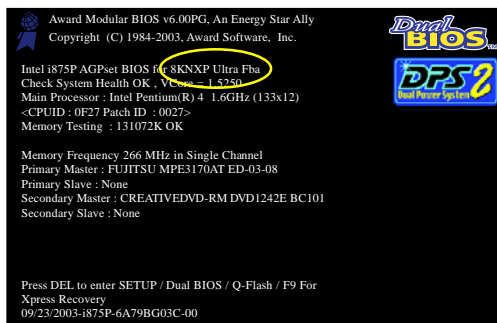
After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes Fab after updating.

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.

Intel i875P AGPset BIOS for 8KNXP Ultra Fba
Check System Health OK , Vcore = 1.5250
Main Processor : Intel Pentium(R) 4 1.6GHz (133x12)
<CPUID : 0F27 Patch ID : 0027>
Memory Testing : 131072K OK

Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None

Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For
Xpress Recovery
09/23/2003-i875P-6A79BG03C-00

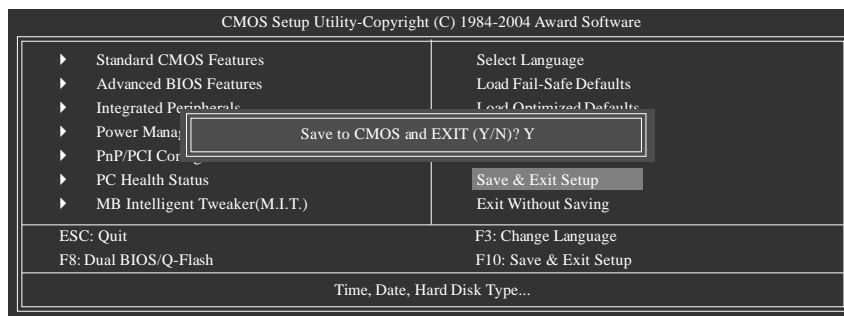6. Press **Del** to enter BIOS menu after system reboots. When you are in BIOS menu, move to **Load Fail-Safe Defaults** item and press **Enter** to load BIOS Fail-Safe Defaults. Normally the system redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded.

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Mana~	Load Fail-Safe Defaults (Y/N)? Y
▶ PnP/PCI Cor~	
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Press **Y** on your keyboard to load defaults.

7. Select **Save & Exit Setup** item to save the settings to CMOS and exit the BIOS menu. System will reboot after you exit the BIOS menu. The procedure is completed.
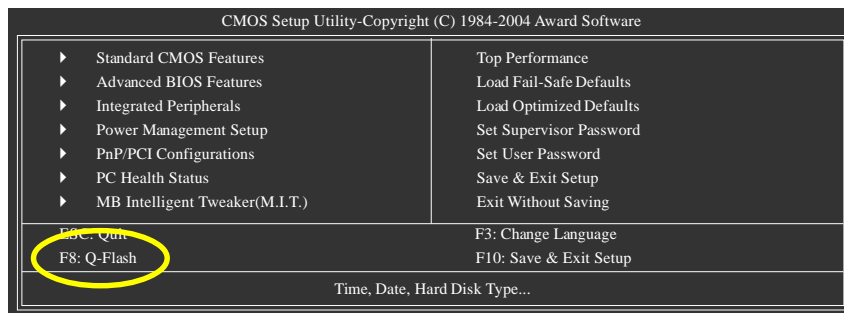
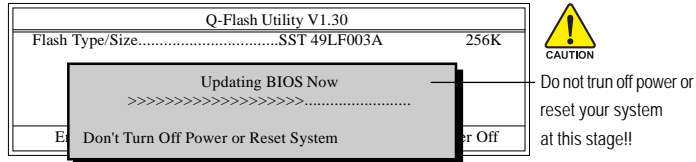| CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Mana~	Save to CMOS and EXIT (Y/N)? Y
▶ PnP/PCI Cor~	
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Press **Y** on your keyboard to save and exit.

Part Two:

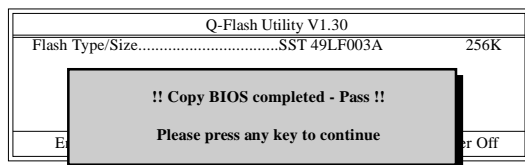**Updating BIOS with Q-Flash™ Utility on Single-BIOS Motherboards.**

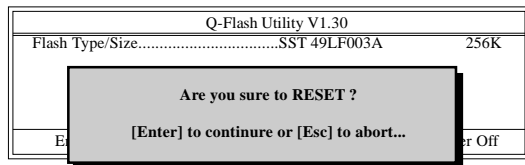This part guides users of single-BIOS motherboards how to update BIOS using the Q-Flash™ utility.

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Top Performance
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Management Setup	Set Supervisor Password
▶ PnP/PCI Configurations	Set User Password
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Exploring the Q-Flash™ utility screen

The Q-FlashBIOS utility screen consists of the following key components.

```
                    Q-Flash Utility V1.30                    ─── Q-Flash™ utility bar
Flash Type/Size.................................SST 49LF003A      256K

                  Keep DMI Data    Enable
                 Update BIOS from Floppy
                   Save BIOS to Floppy
Enter : Run        ↑↓:Move        ESC:Reset      F10:Power Off ─── Action bar
```

Task menu for Q-Flash™ utility (label pointing to left)

Task menu for Q-Flash utility:

Contains the names of three tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

1. Press arrow buttons on your keyboard to move the light bar to "Update BIOS from Floppy" item in the Q-Flash menu and press Enter button.

    Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

> **NOTE** If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press Enter.

    In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8GE800.F4, is listed.

⚠ **CAUTION** Please confirm again you have the correct BIOS file for your motherboard.

```
                    Q-Flash Utility V1.30
Flash Type/Size.................................SST 49LF003A      256K
                        1 file(s) found
     8GE800.F4                              256K            ─── BIOS file in the floppy
                                                                 disk.
     Total size : 1.39M            Free size : 1.14M
E    F5 : Refresh                  DEL : Delete      er Off
```

```
                    Q-Flash Utility V1.30                       ⚠ CAUTION
Flash Type/Size.................................SST 49LF003A      256K
                                                                 Do not trun off power or
     Reading BIOS file from floppy ...                           reset your system at
     >>>>>>>>>>>>>>>.....................                        this stage!!
E    Don't Turn Off Power or Reset System           er Off
```

After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

⚠ **CAUTION** Please do not take out the floppy disk when it begins flashing BIOS.

3. Press Y button on your keyboard after you are sure to update BIOS.
   Then it will begin to update BIOS. The progress of updating BIOS will be shown at the same time.

```
                        Q-Flash Utility V1.30
   Flash Type/Size................................SST 49LF003A        256K
   
                        Updating BIOS Now
                >>>>>>>>>>>>>>>>>>>>>>..........................
   
   E    Don't Turn Off Power or Reset System                   r Off
```

⚠ CAUTION
Do not trun off power or reset your system at this stage!!

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

```
                        Q-Flash Utility V1.30
   Flash Type/Size................................SST 49LF003A        256K
   
                   !! Copy BIOS completed - Pass !!
   
                   Please press any key to continue
   E                                                            r Off
```

5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.

```
                        Q-Flash Utility V1.30
   Flash Type/Size................................SST 49LF003A        256K
   
                     Are you sure to RESET ?
   
              [Enter] to continure or [Esc] to abort...
   E                                                            r Off
```

After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes F4 after updating

```
   Award Modular BIOS v6.00PG, An Energy Star Ally
   Copyright  (C) 1984-2003, Award Software,  Inc.
   
   Intel 845GE AGPSet BIOS for 8GE800 F4
   Check System Health OK
   Main Processor : Intel Pentium(R) 4  1.7GHz (100x17.0)
   <CPUID : 0F0A Patch ID  : 0009>
   Memory Testing  : 122880K OK + 8192K Shared Memory
   
   Primary Master : FUJITSU MPE3170AT ED-03-08
   Primary Slave : None
   Secondary Master : CREATIVEDVD-RM DVD1242E BC101
   Secondary Slave : None
   
   
   
   Press DEL to enter SETUP / Q-Flash
   03/18/2003-I845GE-6A69YG01C-00
```

6. Press Del to enter BIOS menu after system reboots and "Load BIOS Fail-Safe Defaults". See how to Load BIOS Fail-Safe Defaults, please kindly refer to Step 6 to 7 in **Part One**.

   Congratulation!! You have updated BIOS successfully!!

Method 2 : @BIOS™ Utility

If you do not have a DOS startup disk, we recommend that you use the new @BIOS utility. @BIOS allows users to update their BIOS under Windows. Just select the desired @BIOS server to download the latest version of BIOS.

Fig 1. Installing the @BIOS utility

Select **@BIOS** item than click Install

Fig 2. Installation Complete and Run @BIOS

Click Sart/ Programs/ GIGABYTE/ @BIOS

Fig 3. The @BIOS Utility

Click "✓" Click "Update New BIOS"

Fig 4. Select the desired @BIOS server
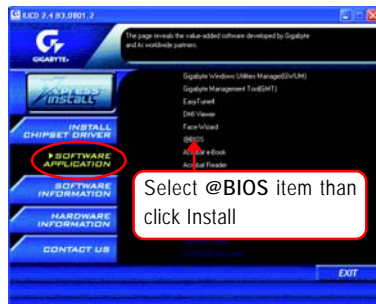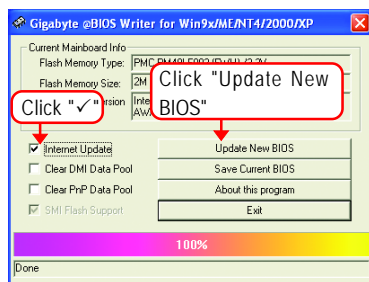
1. Methods and steps:

I. Update BIOS through Internet

    a. Click "Internet Update" icon

    b. Click "Update New BIOS" icon

    c. Select @BIOS™ sever

    d. Select the exact model name on your motherboard

    e. System will automatically download and update the BIOS.

II. Update BIOS NOT through Internet:

    a. Do not click "Internet Update" icon

    b. Click "Update New BIOS"

    c. Please select "All Files" in dialog box while opening the old file.

    d. Please search for BIOS unzip file, downloading from internet or any other methods (such as: 8I845GV.E2).

    e. Complete update process following the instruction.

III. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

2. Note:

I.   In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.

II.   In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.

III. In method I, if the BIOS file you need cannot be found in @BIOSTM server, please go onto Gigabyte's web site for downloading and updating it according to method II.

IV.   Please note that any interruption during updating will cause system unbooted

4-1-4 2- / 4- / 6- Channel Audio Function Introduction

This motherboard provide 6 audio connector. You are able to use 2-/4-/6-channnels audio feature by audio software selection.

The installation of Windows 98SE/2K/ME/XP is very simple. Please follow next step to install the function!

Stereo Speakers Connection and Settings:

We recommend that you use the speaker with amplifier to acqiire the best sound effect if the stereo output is applied.

STEP 1:
Connect the stereo speakers or earphone to "Line Out".
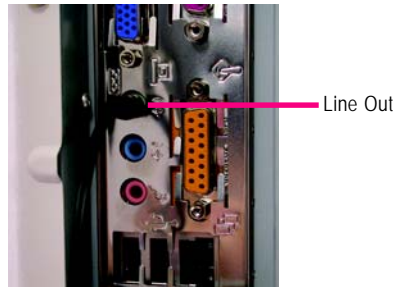
Line Out

STEP 2 :
After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

Sound Effect

10:41 AM
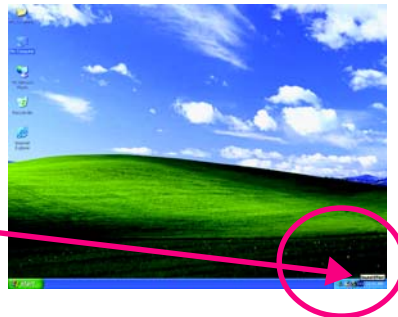
STEP 3:
Select "Speaker Configuration", and choose the "2 channels for stereo speakers out put".

2-channel mode for stereo speaker output
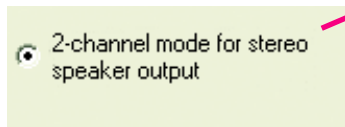
4 Channel Analog Audio Output Mode

STEP 1 :
Connect the front channels to "Line Out", the rear channels to "Line In".
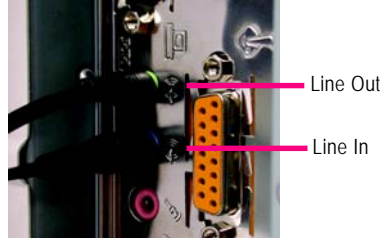
Line Out

Line In

STEP 2 :
After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

Sound Effect

10:41 AM
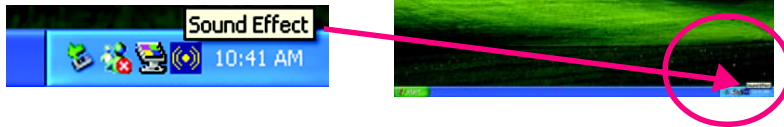
STEP 3 :
Select "Speaker Configuration", and choose the "4 channels for 4 speakers out put".
Disable "Only SURROUND-KIT", and press "OK".

4-channel mode for 4 speaker output

When the "Environment settings" is "None", the sound would be performed as stereo mode (2 channels output). Please select the other settings for 4 channels output.
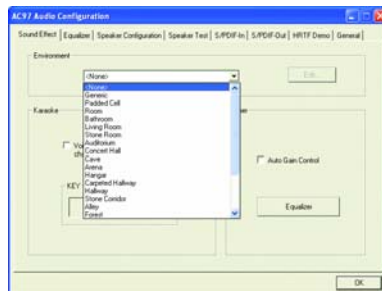
Basic 6 Channel Analog Audio Output Mode

Use the back audio panel to connect the audio output without any additional module.
STEP 1 :
Connect the front channels to "Line Out", the rear channels to "Line In", and the Center/Subwoofer channels to "MIC In".
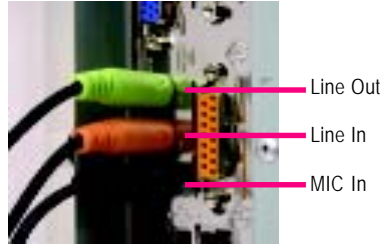
Line Out
Line In
MIC In

STEP 2 :
After installation of the audio driver, you'll find an icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

Sound Effect
10:41 AM

STEP 3 :
Select "Speaker Configuration", and choose the "6 channels for 5.1 speakers out put".
Disable "Only SURROUND-KIT" and pess "OK".
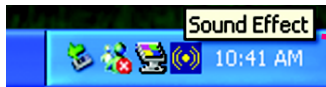
6-channel mode for 5.1 speaker output
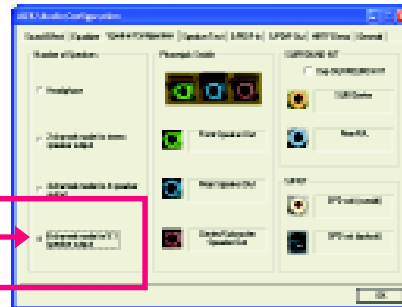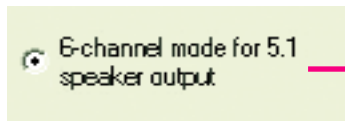
Advanced 6 Channel Analog Audio Output Mode (using Audio Combo Kit,Optional Device):
(Audio Combo Kit provides SPDIF output port : optical & coaxis and SURROUND-KIT : Rear R/L & Center/subwoofer)

SURROUND-KIT access analog output to rear channels and Center/Subwoofer channels. It is the best solution if you need 6 channel output, Line In and MIC at the same time. "SURROUND-KIT" is included in the GIGABYTE unique "Audio Combo Kit" as picture.

STEP 1 :
Insert the "Audio Combo Kit" in the back of the case,and fix it with the screw.

STEP 2 :
Connect the "SURROUND-KIT" to SUR_CEN on the M/B.
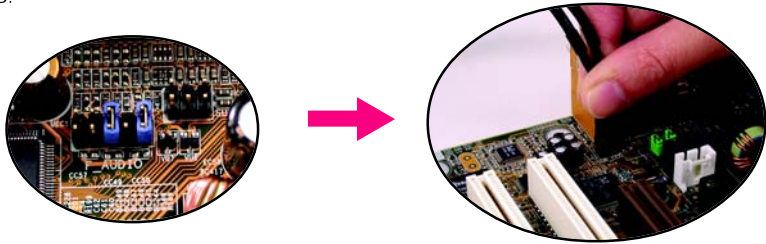
STEP 3 :
Connect the front channels to back audio panel's
"Line Out", the rear channels to SURROUND-KIT's
REAR R/L, and the Center/Subwoofer channels to
SURROUND-KIT's SUB CENTER.
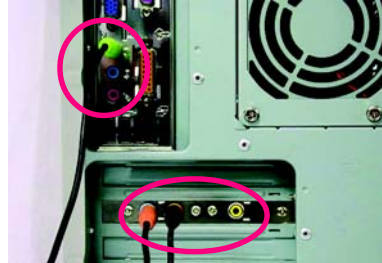
STEP 4 :
Click the audio icon "Sound Effect" from the win-
dows tray at the bottom of the screen.
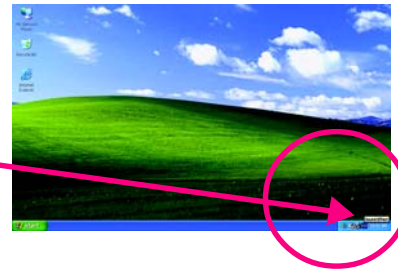
STEP 5 :
Select "Speaker Configuration", and choose the
"6 channels for 5.1 speakers out put".
Enable "Only SURROUND-KIT" and press "OK".
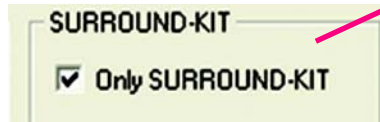
Basic & Advanced 6 Channel Analog Audio Output Mode Notes:

When the "Environment settings" is "None", the
sound would be performed as stereo mode (2 chan-
nels output). Please select the other settings for 6
channels output.
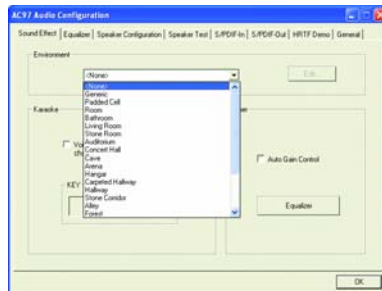
SPDIF Output Device (Optional Device)

A "S/PDIF output" connector is available on the
motherboard. Cable with rear bracket is provided
and could link to the "S/PDIF output" connector (As
picture.) For the further linkage to decoder, rear
bracket provides coaxial cable and Fiber connect-
ing port.
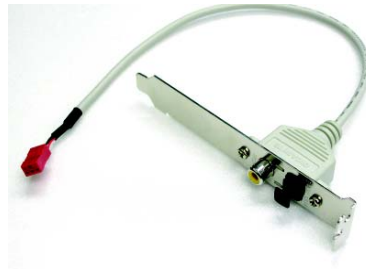
1. Connect the SPDIF output device to the rear
   bracket of PC, and fix it with screw.

2. Connect SPDIF wire to the motherboard.
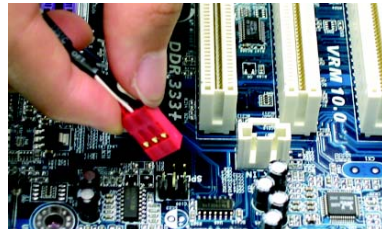
3. Connect co-axial or optical output to the AC3
   decoder.

4-1-5 Jack-Sensing Introduction

Jack-Sensing provides audio connectors error-detection function.

⚠️ **CAUTION** Install Microsoft DirectX8.1 before to enable Jack-Sensing support for Windows 98/98SE/2000/ME.

Jack-Sensing includes 2 parts: AUTO and MANUAL. Following is an example for 2 channels (Windows XP):

Introduction of audio connectors

You may connect CDROM, Walkman or others audio input devices to Line In jack, speakers, earphone or others output devices to Line Out jack, and microphone to MIC In jack.
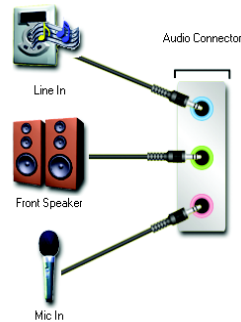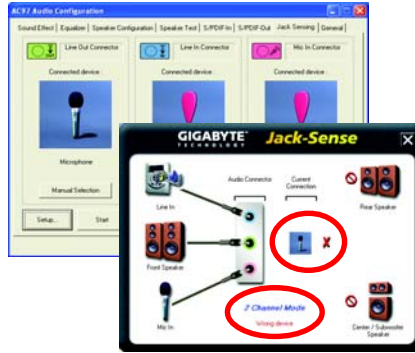
Auto-detecting:

Please connect the devices to the right jacks as above. A window will appear as right picture if you setup the devices properly.
Please note that 3D audio function will only appear when 3D audio inputs.

If you set wrong with the connectors, the warning message will come out as right picture.

Manual setting:

If the device picture shows different from what you set, please press "Manual Selection" to set.

4-2 Troubleshooting

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to http://tw.giga-byte.com/faq/faq.htm

Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why?
Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options.

Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down?
Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on.

Question 3: How do I clear CMOS?
Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS. Please refer to the steps below:
    Steps:
    1.   Turn off power.
    2.   Disconnect the power cord from MB.
    3.   Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to makethem short for one minute).
    4.   Re-insert the battery to the battery holder.
    5.   Connect power cord to MB again and turn on power.
    6.   Press Del to enter BIOS and load Fail-Safe Defaults.
    7.   Save changes and reboot the system.

Question 4: Why does system seem unstable after updating BIOS?
Answer: Please remember to load Fail-Safe Defaults (Or Load BIOS Defaults) after flashing BIOS. However, if the system instability still remains, please clear CMOS to solve the problem.

Question 5: Why do I still get a weak sound after turning up the speaker to the maximum volume?
Answer: Please make sure the speaker you are using is equipped with an internal amplifier. If not, please change another speaker with power/amplifier and try again later.

Question 6: How do I disable onboard VGA card in order to add an external VGA card?
Answer: Gigabyte motherboards will auto-detect the external VGA card after it is plugged in, so you don't need to change any setting manually to disable the onboard VGA.

Question 7: Why cannot I use the IDE 2?
Answer: Please refer to the user manual and check whether you have connected any cable that is not provided with the motherboard package to the USB Over Current pin in the Front USB Panel. If the cable is your own cable, please remove it from this pin and do not connect any of your own cables to it.

Question 8: Sometimes I hear different continuous beeps from computer after system boots up. What do these beeps usually stand for?
Answer: The beep codes below may help you identify the possible computer problems. However, they are only for reference purposes. The situations might differ from case to case.

→AMI BIOS Beep Codes
*Computer gives 1 short beep when system boots successfully.
*Except for beep code 8, these codes are always fatal.
    1 beep Refresh failure
    2 beeps Parity error
    3 beeps Base 64K memory failure
    4 beeps Timer not operational
    5 beeps Processor error
    6 beeps 8042 - gate A20 failure
    7 beeps Processor exception interrupt error
    8 beeps Display memory read/write failure
    9 beeps ROM checksum error
    10 beeps CMOS shutdown register read/write error
    11 beeps Cache memory bad

→ AWARD BIOS Beep Codes
    1 short: System boots successfully
    2 short: CMOS setting error
    1 long 1 short: DRAM or M/B error
    1 long 2 short: Monitor or display card error
    1 long 3 short: Keyboard error
    1 long 9 short: BIOS ROM error
    Continuous long beeps: DRAM error
    Continuous short beeps: Power error

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Tech. Support :
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Non-Tech. Support(Sales/Marketing) :
http://ggts.gigabyte.com.tw/nontech.asp
WEB address : http://www.giga-byte.nl

- China

NINGBO G.B.T. TECH. TRADING CO., LTD.

Tech. Support :

http://cn.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

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Chengdu

TEL: +86-028-85236930

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- Australia

GIGABYTE TECHNOLOGY PTY. LTD.

Tech. Support :

http://www.giga-byte.com.au/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.giga-byte.com.au

- France

GIGABYTE TECHNOLOGY FRANCES S.A.R.L.

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.gigabyte.fr

- Russia

Moscow Representative Office Of Giga-Byte Technology Co., Ltd.

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.gigabyte.ru

- Poland

Representative Office Of Giga-Byte Technology Co., Ltd.

POLAND

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

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